STATIONARY SOURCE PERMIT TO OPERATE

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

O'Sullivan Films, Inc.
944 Valley Avenue
Winchester, Virginia 22601
Registration No.: 80333

is authorized to operate

three calenders

located at

1944 Valley Avenue
Winchester, Virginia

in accordance with the Conditions of this permit.

Approved on DRAFT

Deputy Regional Director, Valley Region

Permit consists of 5 pages.
Permit Conditions 1 to 11.

PERMIT CONDITIONS - the regulatory reference or authority for each condition is listed in parentheses ( ) after each condition.

APPLICATION

This permit approval is based on the permit application dated August 8, 2007 and supplemental information dated August 11, 2006, October 5, 2006, November 13, 2006, February 1, 2007, May 7, 2007,July 19, 2007 and August 16, 2007. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-10 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

PROCESS REQUIREMENTS

1. **Equipment List** - Equipment to be operated at this facility consists of:

    - One Farrel Calender (CAL 1) with a maximum rated capacity of 3.51 tons/hr

    - One Nippon Roll Calender (CAL 2)with a maximum rated capacity of 3.51 tons/hr

    - One Kraffanlagen Heidelberg Calender (CAL 3) with a maximum rated capacity of 3.51 tons/hr

    (9 VAC 5-80-850)

OPERATING/EMISSION LIMITATIONS

2. **Emission Limits: Hazardous Air Pollutants** – Emissions from each calender (CAL1, CAL2 and CAL 3) shall not exceed the limits specified below:

Bis(2-ethylhexyl) phthalate (DEHP) (CAS 117-81-7)	4.52 lbs/hr	12.88 tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-850, 9 VAC 5-60-220 and 9 VAC 5-60-320)

3. **Emission Testing** – The facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Sampling ports shall be provided when requested and safe sampling platforms and access shall be provided
(9 VAC 5-80-880 and 9 VAC 5-80-850)

RECORDS

4. **On Site Records -** The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:

   a. Hourly, monthly and annual DEHP emissions to verify compliance with the emission limitations in Condition 2. Hourly emissions shall be calculated as a monthly average (monthly emissions divided by hours of particular Calender operation for the month). Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months. Emission factors used to calculate emissions shall be approved by the Director, Valley Region.

   b. Monthly and annual throughput processed by each calender (CAL1-CAL3), in tons. Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.

   c. Monthly hours of operation of each calender (CAL1-CAL3).

   d. Results of all stack tests.

   These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
   (9 VAC 5-80-900 and 9 VAC 5-50-50)

GENERAL CONDITIONS

5. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

   a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;

   b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;

   c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and

   d. To sample or test at reasonable times.

   For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.
   (9 VAC 5-170-130 and 9 VAC 5-80-850)

6. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Director, Valley Region, of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Director, Valley Region, in writing.
   (9 VAC 5-20-180 C and 9 VAC 5-80-850)

7. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
   (9 VAC 5-20-180 I and 9 VAC 5-80-850)

8. **Maintenance/Operating Procedures** – At all times, including periods of start-up, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

   The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

b. Maintain an inventory of spare parts.

c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9 VAC 5-50-20 E and 9 VAC 5-80-850)

9. **Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:

   a. Knowingly makes material misstatements in the application for this permit or any amendments to it;

   b. Fails to comply with the conditions of this permit;

   c. Fails to comply with any emission standards applicable to a permitted emission unit;

   d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;

   e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time that an application for this permit is submitted; or

   f. Fails to comply with the applicable provisions of Articles 6, 8, and 9 of 9 VAC 5 Chapter 80.

   (9 VAC 5-80-1010)

10. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, Valley Region, of the change in ownership within 30 days of the transfer.
(9 VAC 5-80-940)

11. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.
(9 VAC 5-80-860 D)

PERMIT CHECK LIST

Date: October 29, 2007
Source/Facility Name: O'Sullivan Films, Inc.
Registration No.: 80333 Plant ID No.: 840-0060

Source Location
Address: 1944 Valley Avenue
City: Winchester State: Virginia Zip: 22601

Source Mailing Address
Address: 1944 Valley Avenue
City: Winchester State: Virginia Zip: 22601

Greenfield? YES ☐ NO ☒

Current Source Classification (if not a Greenfield)
Minor ☐ Synthetic Minor ☐ PSD Major ☒ Title V Major ☒

Permit Action: (Describe new/modified equipment and/or processes, include maximum rated capacities)
Issue state operating permit to limit the facility's potential to emit Bis(2-ethylhexyl) phthalate (DEHP) emissions.

Permit Action Type

New Source Review
Minor ☐ State Major ☐ PSD Major ☐ Exemption ☐ General Permit ☐
Install ☐ Construct ☐ Modify ☐ Relocate ☐
Admin Amend ☐ Minor Amend ☐ Sig Amend ☐

State Operating Permit
New ☒ Admin Amend ☐ Minor Amend ☐ Significant Amendment ☐

Permit includes all emissions units at source YES ☐ NO ☒ Exemption/NA ☐

After this action the source is:
Major (A) ☒ Minor (B) ☐ Synthetic Minor (SM) ☐ PSD ☒

Permit Application Review
☒ Permit application submitted or ☐ Letter Request
YES ☒ NO ☐ NA ☐ Document Certification Form received with Form 7
YES ☐ NO ☐ NA ☒ Confidential information. If yes, checklist completed/letter sent.
YES ☐ NO ☐ NA ☒ Public copy received
YES ☐ NA ☒ Copy of letter from local official for greenfield, or major modified sources
YES ☐ NA ☒ Greenfield Site Evaluation
YES ☐ NO ☐ NA ☒ Permit supersedes other permit(s). If yes, list permit dates:

Regulatory Review
BACT Determination (check one):
☐ Control strategy meets BACT.
Comments:
☒ Exemption/General Permit/**SOP** or Amendment - BACT not applicable.
Rule Applicability
YES ☐ NO ☒ NSPS/MACT/NESHAPS Applicability: If Y, Subpart(s):
NSPS ☐ Subpart: MACT ☐ Subpart: NESHAPS ☐ Subpart:
Comments:
YES ☐ NO ☒ Existing Rule(s) applicability: If Y, Rule(s):

Comments:

Toxic Pollutants (check one):

☐ Exempt ☒ in compliance with 9 VAC 5-60-320 ☐ not evaluated

Comments:

Modeling (check one):

☐ Attached

☒ Copy of approval letter from modeling section

☐ No modeling required by agency policy (< modeling significance levels, etc.)

Comments:

Site Inspected	YES ☒	NO ☐	If yes, inspection date: April 18, 2007	
Calculation sheet(s) attached		YES ☒	NO ☐	NA ☐
NSR Netting		YES ☐	NO ☐	NA ☒

Comments:

Pollution Prevention

Permit contains the following pollution prevention provisions (check all that apply):

☐ Administrative controls, material/fuel limitations or work practices that reduce or eliminate air pollution

☐ Emission/throughput limitations to avoid add-on controls

☐ Emission/operating limitations to avoid regulatory requirements (PSD, TV, State Major, MACT, 112g)

☐ Reporting Requirements. If checked, frequency is [Quarterly, Semi-annual, Annual, Other]

Public Participation

Public Notice Required	YES ☒	NO ☐	NA ☐	If yes, Public Notice Date: February 16, 2008 to March 16, 2008
Public Comments	YES ☐	NO ☐	NA ☐	
Public Hearing Required	YES ☐	NO ☐	NA ☐	If yes, Public Hearing date:

Other Comments and Final Recommendations (attach memo or list below):

Items to explain in comment section of checklist, or memo as applicable:

1) Unusual circumstances, calculations, or analysis.
2) Central Office input.
3) APM discussions and input.
4) Boilerplate deviations, and if superseding existing permit(s), changes from previous permit(s).
5) Explanation if complete date is not the same as the last information submitted.
6) Special compliance monitoring or recordkeeping requirements (initial or continuous)
7) Rationale for calculation of Uncontrolled/Controlled Emissions and/or Potential-to-Emit.

Comments: On May 22, 2006, O'Sullivan Films, Inc. submitted an air permit application to modify Calender No. 2 by increasing allowable raw material throughput and emissions to reflect revised emissions factors resulting from stack testing. A minor NSR permit is being issued to modify the Calender Line No. 2. During the processing of the minor NSR permit, it was noticed that potential emissions of Bis(2-ethylhexyl) phthalate (DEHP) (CAS 117-81-7) from Calender No. 2 could exceed the exemption rate in 9 VAC 5-60-300 C. The facility was asked to evaluate facility-wide DEHP emissions. DEHP is one of many plasticizer compounds used on the calendering lines. These plasticizers are liquids at room temperature and only form fumes at the high temperatures present during vinyl calendering. There are three calender lines (Calender Nos. 1, 2 and 3) at the facility.

The facility submitted a State Operating Permit (SOP) application to limit potential to emit (PTE) DEHP emissions. The facility conducted a modeling analysis to show that permitted DEHP emissions result in predicted ambient air concentrations less than their respective Significant Ambient Air Concentrations (SAAC).

Following is the description of DEHP emission rate calculations used by the facility:

O'Sullivan conducted emissions testing at the Calender 2 in April 2006. VOC emissions testing was conducted using EPA Method 25A. PM emissions testing was conducted using EPA Method 5 (for filterable PM) and using EPA Method 202 (for condensable PM). Based on the long-chain hydrocarbon composition of DEHP (molecular weight of 390; boiling point of 725°F), DEHP is expected to be measured in the PM Method 5 and Method 202 sampling trains. Because the exhaust temperatures are less than 90°F, all plasticizer emissions are expected to collect in either the Method 5 filter (e.g. oil droplets) or to condense and collect in the Method 202 impingers. The facility assumed that all the PM emissions consist of plasticizer fume and droplets. This is a conservative assumption because some of the filterable PM could have included inorganic dust in the vicinity of the calendering operations.

The PM emission factor derived from the April 2006 stack test (Calender 2) data is 1.29 lb PM/ton product. O'Sullivan has reviewed all vinyl products that use DEHP as a plasticizer and has determined that the maximum hourly throughput of these products is 2.82 tons/hr. The rated capacity of the Calender 2 is 3.5 tons/hr resin. The facility conservatively used the rated capacity of Calender 2, i.e. 3.5 tons/hr (rather than the maximum production rate of DEHP based vinyl products) and the PM emission factor of 1.29 lb/ton to compute a maximum hourly DEHP emission rate of 4.52 lb/hr, or 0.569 g/s. This is the DEHP "short term" emission rate used in the modeling analysis from each of the three calenders to evaluate worst-case hourly ambient impacts of DEHP. The facility used 12.88 tons/yr from each calender to compute annual DEHP emissions. The permitted emission rates of DEHP for each of the three calendering lines are presented in attached Table 1.

As shown in Table 2, the modeling results indicated that DEHP emissions from the facility result in predicted ambient air concentrations less than their respective SAAC. Also attached is the email from the DEQ modeling section (email dated May 18, 2007 from Robert Lute to Kevin Burkett) confirming that modeling results demonstrated compliance with the hourly and annual Significant Ambient Air Concentrations for Bis(2-ethylhexyl)phthalate of 250 $\mu g/m^3$ and 10 $\mu g/m^3$, respectively.

The minor NSR permit is being processed concurrently with the SOP issuance. Also, attached is the engineering memo for the minor NSR permit.

Notice of the draft permit inviting public comment was placed in *The Winchester Star* newspaper. The public notice period began February 16, 2008 and ended on March 16, 2008. A copy of the public notice was sent to EPA on February 15, 2008. Since there was significant public interest in the air quality issues relevant to the draft permit, a public hearing has been scheduled. The public hearing will be held on May 5, 2008. Public comments will be received until May 20, 2008.

Recommendation: Pending Public Participation Requirements.

Environmental Engineer's Signature: _____ Date: _____

Air Permit Manager's Signature: _____ Date: _____

TABLE 1
Summary of DEHP Emissions for Calender Lines

Line	PM Emission Factor[1] (lb/ton)	Maximum Short-Term Hourly Production (tph)	Maximum Hourly DEHP Emission (lbs/hr)	Maximum Long-Term Average DEHP Emission[2] (lbs/hr)	Maximum Annual DEHP Emission[3] (tpy)
Calender #1	1.29	3.51	4.52	2.94	12.88
Calender #2	1.29	3.51	4.52	2.94	12.88
Calender #3	1.29	3.51	4.52	2.94	12.88

Notes

1. DEHP plasticizer emissions conservatively assumed to equal PM emissions measured during April 2006 test.
2. Based on 65% of plasticizer as DEHP on a 12-month average basis.
3. Maximum annual DEHP emissions using long-term average rate assuming 8,760 hrs/yr production.

TABLE 2
Modeling Results that Demonstrate Attainment with Significant Ambient Air Concentration (SAAC)*

Toxic Pollutant	Modeling Results		SAAC		Model
	Maximum 1-hour Impact ($\mu g/m^3$)	Maximum Annual Impact ($\mu g/m^3$)	1-hour Concentration ($\mu g/m^3$)	Annual Concentration ($\mu g/m^3$)	ISCPRIME
Bis(2-ethylhexyl) phthalate (DEHP)	225.28	9.22	250	10	

* Modeling was conducted assuming all three calendars are operating at same time with emission rates as listed in TABLE 1.